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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,070	02/07/2002	Sang Bae Kim	ASIA14.001AUS	2399

20995 7590 02/06/2003

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EXAMINER

ASINOVSKY, OLGA NMN

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 02/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/073,070Applicant(s)
Kim et alExaminer
Olga AsinovskyArt Unit
1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 27, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Feb 7, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6 6) ☐ Other:

Art Unit: 1711

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Schauder U.S. Patent 6,383,439.

The claimed invention is a method for producing a polymer composition, comprising: mixing an ethylene-alpha0olefin elastomer and a polyolefin resin to provide a mixture thereof; adding to the mixture one or more monomers comprising an unsaturated organic compound containing at least one carbonyl group, and polymerizing one or more monomers in the presence

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Art Unit: 1711

of a grafting initiator, whereby polymers of one or more monomers graft from a backbone of the ethylene-alpha-olefin elastomer, for claim 1; and a polymer composition for the present claim 26, comprising a polyolefin resin and a chemically modified ethylene-alpha-olefin elastomer mixed with the polyolefin resin, wherein said chemically modified ethylene-alpha-olefin is produced by a method disclosed in claim 1.

Schauder discloses chemically modified elastomers and blend thereof for obtaining a polymer composition. An ethylene-higher alpha-olefin polymer is grafted with an unsaturated organic compound containing at least one carbonyl group, column 1, lines 49-52. The grafted polymer can be blended with one or more additional polymers such as HDPE or LDPE, or LLDPE, or VLDPE, or other ethylene alpha-olefin copolymer, or polypropylene, or engineering thermoplastics including polyamide, column 4, line 55 through column 5, line 13, for the present claims. The grafted monomer having a carbonyl group such as maleic anhydride, column 7, line 39 is readable in the present claims 21 and 38. The ethylene-alpha-olefin polymers have dienes including 5-ethylidene-2-norbornene, column 3, line 24, for the present claim 14. The ethylene content for said ethylene-alpha-olefin polymer is from 30 to 80 and from 40 to 90 weight %, column 1, lines 56 and 61, for the present claims 15-18 and 33-36. The grafting initiator such as a dialkyl peroxides, column 3, line 55 are readable in the present claims 1 and 5. The graft polymerization is performed by a melt reaction with a peroxide and an unsaturated compound having a carbonyl function at a temperature 210-230 C, example 1 at column 7, for the present

Art Unit: 1711

claims. The grafted polymer and the additional polymers can be combined by melt blending in a twin screw extruder, column 5, lines 10-13, for the present claim 4. The peroxide can be added at a 10% concentration in miner oil, column 7, line 42, for the present claim 10. Schauder discloses grafted EPDM polymers having higher ethylene contents which are specified in the present claim 15-18 and 33-36. These EPDM polymers are readable in the present claims as ethylene-alpha-olefin elastomer.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art are relevant to show the state of the art knowledge. The closest reference is WO 98/07769 which belongs to the patent family to Schauder '6,383,439 which has been discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718 and (703) 872-9311 after final.

Art Unit: 1711

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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January 30, 2003

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700